

REMARKS

The Office Action of August 15, 1997, has been carefully considered.

It is noted that claims 1 and 2 are rejected under 35 U.S.C. 103(a) over the patent to Köbler, et al. in view of the patent to Fantoni, et al. and the patent to Johnson.

Claim 3 is rejected under 35 U.S.C. 103(a) over Köbler, et al. in view of Fantoni, et al. and Johnson, and further in view of the patent to Fromson, et al. and the patent to Gerhardt.

Claim 4 is rejected under 35 U.S.C. 103(a) over Köbler, et al. in view of Fantoni, et al. and Johnson, and further in view of the patent to Tittgemeyer.

Claim 5 is rejected under 35 U.S.C. 103(a) over Köbler, et al. in view of Fantoni, et al. and Johnson, and further in view of Tittgemeyer, the patent to Kühn, et al. and the patent to Morgan.

Claim 6 is rejected under 35 U.S.C. 103(a) over Köbler, et al. in view of Fantoni, et al. and Johnson, and further in view of Kühn, et al., Tittgemeyer and Gerhardt.

Claim 7 is rejected under 35 U.S.C. 103(a) over Köbler, et al. in view of Fantoni, et al. and Johnson, and further in view of Kühn, et al., the patent to Lewis and the patent to Berna, et al.

Claim 8 is rejected under 35 U.S.C. 103(a) over Köbler, et al. in view of Johnson and Fantoni, et al.

Claims 9-11 are rejected under 35 U.S.C. 103 over Köbler, et al. in view of Johnson and Fantoni, et al., and further in view of the patent to Dekumbis, et al.

Claims 12 and 13 are rejected under 35 U.S.C. 103 over Köbler, et al. in view of Fantoni, et al., Johnson, Fromson, et al. and Gerhardt.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) over Köbler, et al. in view of Fantoni, et al., Kühn, et al., Morgan and Johnson.

Claim 16 is rejected under 35 U.S.C. 103 over Köbler, et al. in view of Johnson, Fantoni, et al. and each of Kühn, et al., Tittgemeyer and Gerhardt.

Claim 17 is rejected under 35 U.S.C. 103(a) over Köbler, et al. in view of Johnson, Fantoni, et al., the patent to Fadner, et al., Morgan and the patent to Jenkins.

It should be mentioned that the claims now on file specifically define a metal carrying sleeve for printing and transfer forms, and a process for producing such a metal carrying sleeve. The carrying sleeve consists essentially of a rectangular thin-walled flat metal sheet that is bent to a desired hollow cylindrical form and has a metal weld seam that permanently connects together the facing edges of the sheet so that the sheet is slidable onto a printing cylinder via pressurized air. The carrying sleeve further has a homogeneous, continuous and uniform outer cylindrical metal surface including the weld seam, which metal surface is formed by processing the surface and the weld seam so that format variable continuous printing is possible or a layer structure is placeable on the outer circumferential surface including the weld seam.

It is respectfully submitted that the claims now on file differ essentially and in an unobvious, highly advantageous manner from the methods and constructions disclosed by the references.

Turning now to the references, and particularly to the patent to Köbler, et al., it can be seen that this patent discloses a register device for a sleeve-shaped offset printing form. Although the carrier sleeve of Köbler, et al. can be used for channel-free printing, it is not useable for endless or continuous printing. In other words, the carrier sleeve of Köbler, et al. always has a region of the outer surface of the sleeve which is not useable as a printing surface. This region corresponds to the weld seam. In the presently claimed invention, on the other hand, the weld seam and the remainder of the metal surface are processed so that the entire outer circumferential surface of the sleeve including the weld seam can be used for printing or can be covered with a layer structure. Thus, continuous, endless printing is possible with the presently claimed invention and printing with variable formats can be undertaken.

The present invention starts from the teachings of Köbler, et al. and expands upon them to provide a sleeve which can be used for variable format continuous printing.

A significant difference between the presently claimed carrying sleeve and the cited prior art is that the present carrying sleeve is configured and constructed so that a photoconductive layer or a gravured copper layer, or a continuous rubber blanket layer construction or a continuous ceramic layer can be brought onto the carrying sleeve to permit continuous form-variable printing. Such a construction is not taught by Köbler, et al.

Fantoni, et al. disclose a method for mechanically joining the marginal portions of a blank of a printing plate. Although the carrier sleeve of Fantoni, et al. is seamless, the film material 8 of Fantoni, et al. is designed to be removable at the end of the printing process and thus the seam 8 does not form part of the printed image, in other words continuous printing is not possible. Furthermore, Fantoni, et al. do not connect together opposing edges of the sheet.

The patent to Johnson discloses a cylinder 10 on which a plate 12 is brought as a sleeve, which sleeve 12 is mounted to the cylinder 10 by a weld connection 13. Thus, Johnson does not deal with a carrier sleeve for printing or transfer cylinders as is dealt with in the presently claimed invention, but instead deals with a cylinder on which a material for printing is fixed by a weld.

The Examiner combined these references in determining that claims 1, 2 and 8 would be unpatentable over such a combination. It is respectfully submitted that a combination of these references does not teach or suggest a metal carrying sleeve for printing and transfer cylinders, which sleeve has a metal weld seam that permanently connects together the facing edges of the sheet. Fantoni, et al. provide absolutely no teaching concerning the connecting together of the facing edges of the sheet. In fact the end edges of the sheet of Fantoni, et al. are not even facing one another. Johnson discloses a weld seam which connects together end faces of a sheath 12, which weld seam 13 also connects the sheath 12 to a cylindrical member 10. Thus, Johnson, et al. do not deal with a weld seam which permanently connects together only the facing edges of the sheet so that the sheet is slidable onto to a printing cylinder via pressurized air, as in the presently claimed invention. Finally, Köbler, et al. do not disclose a metal carrying sleeve having a homogeneous, continuous and uniform outer circumferential metal surface which includes the metal weld seam and is formed by processing the surface and the weld seam so that format and variable continuous printing is possible, as in the presently claimed invention. In view of the differing problems and solutions addressed and presented in the references it is respectfully submitted that it would not be obvious to pick and choose various features of each of these references and take them out of the context of the teachings of the

reference and apply them to a further reference to arrive at the presently claimed invention. Such a reassembly of the invention is believed nothing more than impermissible hindsight reconstruction.

In view of these considerations it respectfully submitted that the rejection of claims 1, 2 and 8 under 35 U.S.C. 103(a) over a combination of the above-discussed references is overcome and should be withdrawn.

As for the remaining rejections of the claims, applicants respectfully submit that the above arguments apply equally well to the remaining independent claims. Thus, it is respectfully submitted that the various rejections of the claims under 35 U.S.C. 103(a) are overcome and should be withdrawn.

Reconsideration and allowance of the present application are respectfully requested.

Any additional fees or charges required at this time in connection with the application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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